



# Transportation Synthesis Report

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## Workforce Options for Installation and Maintenance of Permanent Highway Signs

*Prepared for*  
**Bureau of Highway Operations  
Division of Transportation System Development**

*Prepared by*  
**CTC & Associates LLC  
WisDOT RD&T Program  
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*Transportation Synthesis Reports (TSRs) are brief summaries of currently available information on topics of interest to WisDOT technical staff in highway development, construction and operations. Online and print sources include NCHRP and other TRB programs, AASHTO, the research and practices of other state DOTs, and related academic and industry research. Internet hyperlinks in TSRs are active at the time of publication, but changes on the host server can make them obsolete.*

### **Request for Report**

The Bureau of Highway Operations requested a report on the type of workforce that other state agencies are using for work related to permanent highway signs. Specifically, to what extent are DOT, contractor or county employees being utilized to install, maintain and repair permanent signs along highways, and what types of efficiencies accrue from outsourcing these jobs? The Bureau is also interested in a review of recent research on this topic.

### **Summary**

We conducted a brief survey of all AASHTO Research Advisory Committee members to determine 1) the extent they use DOT, county or contractor workforces for new installations, routine maintenance, and repair or replacement of damaged signs; and 2) reasons for using contractors, particularly for maintenance and repair jobs. We also asked for contact information for individuals responsible for permanent highway signs.

Twenty-two state DOTs and four Canadian agencies answered the survey. See **Survey Responses from Agencies** on pp. 2-6 and a **Summary Table** on p. 8.

Key findings from the survey include:

- For sign installation on new construction, most of the 26 agencies primarily utilize contractors, with only six agencies using primarily their own staff.
- For routine sign maintenance, most of the agencies primarily use their own employees, with only three primarily using contractors;
- For repair or replacement, most of the agencies primarily use their own staff;
- Alberta Infrastructure and Transportation is 100 percent outsourced, and cites advantages including cost savings for services and reduced need for agency staff on the government payroll;
- Florida DOT is striving for a goal of 80 percent contract maintenance—half to be performed by asset maintenance contractors, and half by conventional contract.
- To help ensure a quality product on major contracts, Minnesota DOT districts have begun to utilize “sign supervisors,” district staff who are trained to effectively inspect projects for shortcomings prior to finalization. Mn/DOT is hiring out for the development of a statewide sign management program for the department.

In terms of recent research we found NCHRP Synthesis 313 (2003) on State DOT Outsourcing and Private-Sector Utilization and a Transportation Synthesis Report previously prepared for WisDOT on Privatization of Pavement Marking and Traffic Signing: Long-Term Costs vs. Benefits. See **Recent Research** on p. 6-7.

## **Survey Responses from Agencies**

### **Alaska Department of Transportation & Public Facilities**

**Contact:** Jim Elieff, Manager- Statewide Research & Technology Transfer, 907-451-5479,

[jim.elieff@dot.state.ak.us](mailto:jim.elieff@dot.state.ak.us)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees.

### **Alberta Infrastructure and Transportation**

**Contact:** Sharla Griffiths, Highway Operations Engineer- Technical Standards Branch, 780-415-1057,

[Sharla.Griffiths@gov.ab.ca](mailto:Sharla.Griffiths@gov.ab.ca)

- Initial installation: construction contractors.
- Routine maintenance: maintenance contractors.
- Repair or replacement: maintenance contractors.

Additional comments provided by Sharla:

“Since 1996 we have had all of our highway maintenance contracted out, as well as all of our construction. We don’t have any department maintenance forces, no maintenance equipment – we are 100 percent outsourced. Every item of work is issued under a work order. Agency staff issue the work orders, monitor the work and make sure it is done correctly. If the work is not done on time, the contractor may be assessed a penalty. We have six contractors in five-year contracts now, and we’re working on some six and seven-year contracts. I think the top advantage to contracting has been the cost savings for services -- it’s a competitive market, and that works in our favor. Also, from a government standpoint, contracting reduces the need to have more agency staff on the payroll.”

For further information, Sharla suggests visiting

[http://www.infratrans.gov.ab.ca/Tendering\\_%26\\_Contracting/Roads%2c\\_Bridges\\_%26\\_Water/index.htm](http://www.infratrans.gov.ab.ca/Tendering_%26_Contracting/Roads%2c_Bridges_%26_Water/index.htm). This site includes everything that consultants, contractors and vendors need to do business with government for road projects, from specifications and safety certification to contracts and tender opportunities.

### **Arizona DOT**

**Contact:** Raul Amavisca, 602-712-6627, [RAmavisca@azdot.gov](mailto:RAmavisca@azdot.gov)

- Initial installation: new construction is done by contractors as part of a project -- design, bid, build.
- Routine maintenance: state DOT workers maintain signing, though sign rehabilitation projects are used just to replace signs on a regular basis. The regularity depends upon funding, and our funding is now such that the sign rehabs are 30 years apart. Only freeways are done in the sign rehab program.
- Repair or replacement: state DOT people repair or replace damaged signs, unless it was done in an ongoing project. If the sign is not urgently needed for safety such that our forces need to respond, the contractor will usually be asked to fix it (either by change order if done by others or at his cost if damaged by construction forces).

### **British Columbia Ministry of Transportation**

**Contact:** Dirk Nyland, Chief Engineer, 250-387-2310, [dirk.nyland@gov.bc.ca](mailto:dirk.nyland@gov.bc.ca)

- Initial installation: contractor employees, usually the construction contractor.
- Routine maintenance: contractor employees, maintenance has been privatized.
- Repair or replacement: contractor employees, maintenance has been privatized.

### **Delaware DOT**

**Contact:** Bob Hutson, 302-760-2563, [bob.hutson@state.de.us](mailto:bob.hutson@state.de.us)

- Initial installation: state DOT employees 90%, contractor employees 10%.
- Routine maintenance: state DOT employees 100% for standard ground-mounted signs, contractor employees 100% for overhead and I-beam.
- Repair or replacement: state DOT employees 100% for standard ground-mounted signs, contractor employees 100% for overhead and I-beam.

### **Florida DOT**

**Contact:** Dale Cook, 850-410-5757 x138, [dale.cook@dot.state.fl.us](mailto:dale.cook@dot.state.fl.us)

- Initial installation: contractors primarily, DOT employees to a limited extent.
- Routine maintenance: contractors primarily, DOT employees to a limited extent.
- Repair or replacement: contractors primarily, DOT employees to a limited extent.

Additional comments provided by Dale:

“We still have sign crews that do a limited amount of installation, repair and replacement. But we’re reaching to attain a goal of 80 percent contract maintenance. Of the 80 percent, 50 percent will be done by asset maintenance contractors and 50 percent through conventional contracts. What we do is negotiate with an asset maintenance contractor to maintain, for example, a corridor of roadway. We’re even experimenting with entire counties. We turn over all maintenance to that asset maintenance contractor. He acts like DOT – manages the roadways, keeps them maintained, uses his own crews or contracts out at his discretion. Typically these are seven-year contracts with a seven-year renewable, and the contractor is paid monthly, based on the annual agreed-to price. The contractor is graded on what we call a maintenance rating program. He’s required to keep a maintenance rating of various different features we have to an 80. If he does not attain those goals then he is penalized monetarily. Any areas of nonconformance or noncompliance, where the contractor has deficiencies, he’s penalized accordingly. Studies have shown that asset management contracting is a cost-effective option for us.

“In the state of Florida we have our own sign fabrication facility located in Lake City. We have incorporated in our asset management contracts a negotiated square-footage allotment of sign panels. The contractor can order signs through our DOT facility, and is then responsible for installation and erection.”

For further information, Dale suggests visiting the State Maintenance Office Asset Management Web site at <http://www.dot.state.fl.us/statemaintenanceoffice/asset.htm>.

### **Illinois DOT**

**Contact:** Aaron Weatherholt, Traffic Operations Engineer- Bureau of Operations, 217-782-2076,

[Aaron.Weatherholt@Illinois.gov](mailto:Aaron.Weatherholt@Illinois.gov)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: contractor employees.

Additional comments provided by Aaron:

“For normal maintenance – where we’re just overlaying or replacing signs due to failed sheeting, that sort of thing – we do a lot of that in house. For new construction of expressway, freeway or interstate roadway, sign installation is typically built into the contract. It’s more of a cost issue. As a department we are not set up to do that work internally. We don’t have the larger trucks and specialized equipment needed for installing the larger signs. For example, we use the structural steel breakaway sign post design, and we are not set up to do the concrete foundations of the posts. When you consider factors such as the outlay of funds that would be needed to purchase and maintain the specialized equipment, and the fact that it would be laying idle for periods of time, contracting is saving us some money.”

### **Iowa DOT**

**Contact:** Timothy Crouch, State Traffic Engineer, 515-239-1513, [tim.crouch@dot.iowa.gov](mailto:tim.crouch@dot.iowa.gov)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees are used for the majority of the signs, however, contractor employees are used for the replacement of the larger guide signs on the interstate and freeways.
- Repair or replacement: state DOT employees are used for the majority of the signs, however, contractor employees are used for the larger guide signs on the interstate and freeways.

Additional comments provided by Tim:

“For initial installation, the big thing for us was, we had a reduction in force. Maintenance folks were being offered dual tasks. They were starting to inspect some construction projects, and had less and less time to install new signs. We don’t have a contractor on-call to install or maintain signs. What we’ve done is incorporate sign installation into new construction projects. That is, we specify that the contractor will install all the signs. That way we don’t need the equipment on hand to do some of the work that’s involved in installing the larger signs. We don’t have the equipment to auger out the footings, pour concrete or install a reinforcement bar. We do monthly contracts to install or replace what we call our Type B highway signs along the interstate and freeways. These are larger signs that are up on a truss, on a bridge, or ground-mounted on steel I-beam posts. We’ve done that for years -- we don’t have the capability to do that work ourselves.”

## **Kansas DOT**

**Contact:** Steven Buckley, State Traffic Signing Engineer, 785-296-3618, [Buckley@ksdot.org](mailto:Buckley@ksdot.org)

- Initial installation: state DOT and contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees.

(Note from Dick McReynolds, Engineer of Research: “I am pretty sure I know the answers to this one so I am responding directly rather than sending it to our Bureau of Traffic Engineering. I am not aware that we would do any regular contracted sign maintenance for routine or damage replacements but we might be in the urban area. Steven can respond if we are doing this now.”)

## **Maine DOT**

**Contact:** Stephen Landry, 207-624-3632, [stephen.landry@maine.gov](mailto:stephen.landry@maine.gov)

- Initial installation: state DOT employees most of the time, contractor employees occasionally.
- Routine maintenance: state DOT employees (only use our own forces).
- Repair or replacement: state DOT employees (only our own employees).

## **Maryland DOT**

**Contact:** Paul Stout, Assistant Division Chief-Traffic Operations Division, 410-787-7637, [PStout@sha.state.md.us](mailto:PStout@sha.state.md.us)

- Initial installation: contractors primarily. In some cases state employees will install signs on new construction if contractors cannot fulfill their obligations.
- Routine maintenance: state DOT employees primarily. However a portion of the work is contracted out (the split is estimated at 80% state and 20% contract).
- Repair or replacement: state DOT employees.

## **Michigan DOT**

**Contact:** Mark Bott, 517-335-2625, [bottm@michigan.gov](mailto:bottm@michigan.gov)

- Initial installation: state DOT, county and contractor employees.
- Routine maintenance: state DOT, county and contractor employees.
- Repair or replacement: state DOT and county employees.

## **Minnesota DOT**

**Contact:** Michael Weiss, State Signing Engineer, 651-634-5442, [mike.weiss@dot.state.mn.us](mailto:mike.weiss@dot.state.mn.us)

- Initial installation: when Mn/DOT lets a contract for new construction, the permanent signing is done by the contractor.
- Routine maintenance: for routine maintenance and replacement of permanent signs OFF the interstate highway system, Mn/DOT sign crews perform these functions. On the interstate highway system, if the sign posts are driven U-channel sign posts, routine maintenance is performed by Mn/DOT sign crews. Replacement of signs at the end of their useful life are done under contract.
- Repair or replacement: for this type of work OFF the interstate highway system, Mn/DOT sign crews perform these functions. On the interstate highway system, if the sign posts are driven U-channel sign posts, this type of work is performed by Mn/DOT sign crews. If the sign posts are I-beam posts (used for large guide signs), Mn/DOT will hire a contractor to replace the I-beams. If only the sign panel is damaged (attached to I-beam posts), Mn/DOT may make a new sign panel for Mn/DOT sign crews to install.

Additional comments provided by Mike:

“We install all the signs on the interstate system and other freeways under contract. Historically, federal funding has been a major help in this area. When the interstate was built in Minnesota, 90 percent of the cost for signing was covered through federal aid. Signing was incorporated into the plans, and Mn/DOT’s bid-letting was used. Currently, we’re receiving federal aid for some of our freeway sign betterment contracts that’s allowing us to go ahead and upgrade the sheeting on a number of signs along the freeways. This helps stretch our state’s transportation funds, and Mn/DOT doesn’t need to tap its maintenance budget for sign replacement.

“The larger guide signs along the interstate are on I-beam sign posts in a lot of states including Minnesota. Over the years the standards have changed for clearances. Our sign crews in Minnesota don’t have the equipment, materials or time to replace the footings for those posts, so that’s all done by contract. The same holds true for our overhead signs. We don’t have the materials to install or maintain the extruded aluminum sign panels used for most of the overheads in the state.

“To help ensure a quality product on a major contract, Mn/DOT districts have begun to utilize ‘sign supervisors,’ district staff who are trained to effectively inspect projects for shortcomings prior to finalization. Mn/DOT recently hired the firm SignCAD Systems Inc. (<http://www.signcad.com/index.php>) to develop a statewide sign management program for the department. The Minnesota-based company serves most state DOTs, large municipalities and engineering firms, providing integrated software packages for traffic sign design, cutting and inventory management.”

#### **Montana DOT**

**Contact:** Jon Swartz, Maintenance Division, 406-444-6157, [joswartz@mt.gov](mailto:joswartz@mt.gov)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees.

#### **New Jersey DOT (North, Central and South Region Maintenance/Operations offices)**

**Contacts:** Aram Mardekian, Regional Director- Operations North, 973-770-5170, [aram.mardekian@dot.state.nj.us](mailto:aram.mardekian@dot.state.nj.us);

Bernard James, Regional Director- Operations Central, 732-409-3263, [Bernard.James@dot.state.nj.us](mailto:Bernard.James@dot.state.nj.us);

Bill Kingsland, Manager- South Region Maintenance, 856-486-6608, [CWilliam.Kingsland@dot.state.nj.us](mailto:CWilliam.Kingsland@dot.state.nj.us)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees.

#### **North Dakota DOT**

**Contact:** Dave Levi, 701-328-3687, [dlevi@nd.gov](mailto:dlevi@nd.gov)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees.

#### **Ohio DOT**

**Contact:** Jim Roth, Signing Engineer, 614-752-0438, [jim.roth@dot.state.oh.us](mailto:jim.roth@dot.state.oh.us)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees and contractor employees.
- Repair or replacement: state DOT employees.

#### **Oklahoma DOT**

**Contact:** E. W. Miller, Assistant Chief Traffic Engineer, 405-521-2861, [rmiller@odot.org](mailto:rmiller@odot.org)

- Initial installation: contractors.
- Routine maintenance: contractors Oklahoma City and Tulsa metropolitan areas, state DOT employees rest of the state.
- Repair or replacement: contractors Oklahoma City and Tulsa metropolitan areas, state DOT employees rest of the state.

#### **Oregon DOT**

**Contact:** Barnie Jones, 503-986-2845, [barnie.p.jones@odot.state.or.us](mailto:barnie.p.jones@odot.state.or.us)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees.

#### **Québec, Ministère des Transports du**

**Contact:** Simon Trepanier, 418-644-4490 x2497, [simon.trepanier@mtq.gouv.qc.ca](mailto:simon.trepanier@mtq.gouv.qc.ca)

- Initial installation: state DOT and contractor employees. The construction of the new road is generally done by contractors and supervised by the Ministry. In this case, it is the contractor's responsibility to install permanent signs. When a new sign has to be installed on an existing road, the job is usually done by Ministry employees. Therefore, installation of permanent signs can be done by contractors or by Ministry employees, depending if a contract has been given.
- Routine maintenance: state DOT employees. All maintenance operations on provincial highways are done by Ministry's employees.
- Repair or replacement: state DOT employees. All maintenance operations on provincial highways are done by Ministry's employees.

## **Saskatchewan Highways and Transportation**

**Contact:** Dawn Schmidt, Sign Standards Analyst, 306-787-4754, [dschmidt@highways.gov.sk.ca](mailto:dschmidt@highways.gov.sk.ca)

- Initial installation: Saskatchewan has its own provincial sign crews.
- Routine maintenance: Saskatchewan has its own provincial sign crews.
- Repair or replacement: Saskatchewan uses its preservation crews for emergency replacements such as stop signs but most of the work is done by the sign crews.

## **South Dakota DOT**

**Contact:** John Forman, 605-773-5155, [john.forman@state.sd.us](mailto:john.forman@state.sd.us)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees.

## **Texas DOT**

**Contact:** Brian Stanford, Engineer of Field Coordination- Traffic Operations Division/Traffic Engineering Section, 512-416-3122, [bstanfo@dot.state.tx.us](mailto:bstanfo@dot.state.tx.us)

- Initial installation: contractor employees (most of the time), state DOT employees (not very often anymore).
- Routine maintenance: state DOT employees, contractor employees.
- Repair or replacement: state DOT employees, contractor employees.

## **Vermont Agency of Transportation**

**Contact:** William Ahearn, Materials and Research Engineer, 802-828-2561, [Bill.Ahearn@state.vt.us](mailto:Bill.Ahearn@state.vt.us)

- Initial installation: contractor employees.
- Routine maintenance: state DOT employees.
- Repair or replacement: state DOT employees, contractor employees until project acceptance.

## **Washington DOT**

**Contact:** Dave Bierschbach, Acting State Maintenance Engineer, 360-705-7801, [bierscd@wsdot.wa.gov](mailto:bierscd@wsdot.wa.gov)

- Initial installation: contractor employees primarily. WSDOT does install signs for special requests such as speed limit changes, motorist information, safety issues, etc.
- Routine maintenance: state DOT employees primarily, for routine maintenance and some replacement, especially smaller signs; contractor replaces selected signs, such as large overhead and multi-post signs at end of service life, and other smaller signs as needed.
- Repair or replacement: state DOT employees.

## **Wisconsin DOT**

**Contact:** Matt Rauch, State Signing Engineer, 608-266-0150, [matt.rauch@dotstate.wi.us](mailto:matt.rauch@dotstate.wi.us)

- Initial installation: contractor employees primarily. State employees are no longer used.
- Routine maintenance: county employees.
- Repair or replacement: county employees for plywood or sheet aluminum signs, contractor for large extruded aluminum guide signs.

## **Recent Research**

### **State DOT Outsourcing and Private-Sector Utilization**

NCHRP Synthesis 313 – 2003

[http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_syn\\_313.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_syn_313.pdf).

This study attempted to obtain the most comprehensive collection of data possible relating to the subject of outsourcing. The information was derived from a survey of the 50 states and the District of Columbia and from a review of relevant literature, and was reviewed for trends, common themes and characteristics.

From Chapter 7 – Most Commonly Outsourced Activities and Their Attributes:

- Maintenance (page 24). The Maintenance activity group includes six activities that were mentioned with high frequency: traffic signs and traffic signals, roadway surface, roadside, drainage, bridges. Reasons for outsourcing in this group are specialty skills or equipment and staff constraints. The activities were about evenly split on whether or not potential contractors would be prequalified. The percentage of work outsourced varied from activity to activity, with traffic signs, traffic signals and drainage in the 0 percent to 19 percent range.
- Operations (page 24). Six activities are frequently mentioned in the survey responses with regard to Operations: sign installation, signal installation, pavement markings, ITS, toll collection and traffic information services. All the activities use specialty contractors, all go through a prequalification process, unit price is the method of payment,



and the reasons for outsourcing fall into two categories – staff constraints and the need for specialty skills or equipment.

From Appendix C:

**TABLE C9**  
**OPERATIONS ACTIVITY SATISFACTION**

Activity	Rating
Pavement Markings	7.00
Signal Installation	7.36
Sign Installation	6.42
Intelligent Transportation System	7.15
Toll Collection	8.00
Traffic Information Services	8.75
Other	8.20
Average	7.55

Notes: Ratings are on a scale of 1 to 10, with 1 = very dissatisfied and 10 = very satisfied.

### **Privatization of Pavement Marking and Traffic Signing: Long-Term Costs vs. Benefits**

Wisconsin DOT RD&T Program, Transportation Synthesis Report – 2003

<http://www.dot.wisconsin.gov/library/research/docs/tsrs/tsrprivatizepavementmarkingandsigning.pdf>.

While many states outsource some or all of their traffic sign work and pavement marking, the authors found none that rigorously track the cost-benefit initially or over time. In most cases, states acknowledged it may be more expensive over the course of years to privatize such work, at least in terms of installation and maintenance costs. It appears that the decision to outsource is made more to streamline responsibilities and activities rather than to save costs. Research for this report included conversations with eight state DOTs including:

Massachusetts. Mass Highway's sign shop handles signs in emergencies, but most installations are done as part of construction projects, and large signs are installed by contractors. In both cases, this practice serves to avoid the equipment and personnel costs associated with the duties, a goal since the early 1980s when downsizing maintenance crews became an agency aim.

Michigan. New signs are installed every 12 to 15 years, all outsourced; contracts are awarded by district offices. Maintenance, specialty sign installation and accident-damaged sign replacements are done in-house. The contracting out essentially helps MDOT deal with a staff too small to handle all the regional work. Fifteen years ago, it may have been cheaper to do in-house for any short road section, but now it is more cost-effective to outsource.

New Mexico. The state has been outsourcing sign work since the mid 1990s, and pavement marking since about 1998; both choices followed NMSHTD leadership interests in streamlining payroll via privatization. Costs for pavement marking were about \$.048/foot in-house, and about \$.041/foot via outsourcing; these costs have held steady since. Sign work, with manufacture and install contracts, experiences similar savings. While long-line marking will stay privatized, some sign work may be picked up by district sign crews that are reforming, due to problems with contractors failing to rapidly respond to urgent sign needs. In both cases, signs and striping, NMSHTD has had trouble with quality and responsiveness from contractor.

**AASHTO RAC Survey**  
**Workforce Used for Installation and Maintenance of Permanent Highway Signs**  
**June 5, 2006**

State or Province	New construction	Routine maintenance	Repair or replacement due to damage	Contact for further information
Alaska	Contractor	DOT	DOT	Jim Elieff, Manager- Statewide Research & Technology Transfer, 907-451-5479, jim.elieff@dot.state.ak.us
Alberta	Contractor	Contractor	Contractor	Sharla Griffiths, Highway Operations Engineer- Technical Standards Branch, 780-415-1057, Sharla.Griffiths@gov.ab.ca
Arizona	Contractor	DOT	DOT	Raul Amavisca, 602-712-6627, RAmavisca@azdot.gov
British Columbia	Contractor	Contractor	Contractor	Dirk Nyland, Chief Engineer, 250-387-2310, dirk.nyland@gov.bc.ca
Delaware	DOT 90%, contractor 10%	DOT for ground-mounted, contractor for overhead and I-beam	DOT for ground-mounted, contractor for overhead and I-beam.	Bob Hutson, 302-760-2563, bob.hutson@state.de.us
Florida	Contractor primarily	Contractor primarily	Contractor primarily	Dale Cook, 850-410-5757 x138, dale.cook@dot.state.fl.us
Illinois	Contractor	DOT	Contractor	Aaron Weatherholt, Traffic Operations Engineer- Bureau of Operations, 217-782-2076, Aaron.Weatherholt@Illinois.gov
Iowa	Contractor	DOT primarily, contractor for large freeway signs	DOT primarily, contractor for large freeway signs	Timothy Crouch, State Traffic Engineer, 515-239-1513, tim.crouch@dot.iowa.gov
Kansas	DOT and contractor	DOT	DOT	Steven Buckley, State Traffic Signing Engineer, 785-296-3618, Buckley@ksdot.org
Maine	DOT primarily	DOT	DOT	Stephen Landry, 207-624-3632, stephen.landry@maine.gov
Maryland	Contractor primarily	DOT 80%, contractor 20%	DOT	Paul Stout, Assistant Division Chief- Traffic Operations Division, 410-787-7637, PStout@sha.state.md.us
Michigan	DOT, county and contractor	DOT, county and contractor	DOT and county	Mark Bott, 517-335-2625, bottm@michigan.gov
Minnesota	Contractor	DOT and contractor	DOT and contractor	Michael Weiss, State Signing Engineer, 651-634-5442, mike.weiss@dot.state.mn.us
Montana	Contractor	DOT	DOT	Jon Swartz, Maintenance Division, 406-444-6157, joswartz@mt.gov
New Jersey	Contractor	DOT	DOT	Aram Mardekian, Operations North, 973-770-5170, aram.mardekian@dot.state.nj.us; Bernard James, Operations Central, 732-409-3263, Bernard.James@dot.state.nj.us; Bill Kingsland, Maintenance South, 856-486-6608, CWilliam.Kingsland@dot.state.nj.us
North Dakota	Contractor	DOT	DOT	Dave Levi, 701-328-3687, dlevi@nd.gov
Ohio	Contractor	DOT and contractor	DOT	Jim Roth, Signing Engineer, 614-752-0438, jim.roth@dot.state.oh.us
Oklahoma	Contractor	Contractor Oklahoma City and Tulsa, DOT rest of the state	Contractor Oklahoma City and Tulsa, DOT rest of the state	E. W. Miller, Assistant Chief Traffic Engineer, 405-521-2861, rmiller@odot.org
Oregon	Contractor	DOT	DOT	Barnie Jones, 503-986-2845, barnie.p.jones@odot.state.or.us
Québec	DOT (Ministry employees),	DOT (Ministry employees)	DOT (Ministry employees)	Simon Trepanier, 418-644-4490 x2497, simon.trepanier@mtq.gouv.qc.ca
Saskatchewan	DOT (provincial sign crews)	DOT (provincial sign crews)	DOT (preservation crews for emergency replacements, provincial sign crews for most of the work)	Dawn Schmidt, Sign Standards Analyst, 306-787-4754, dschmidt@highways.gov.sk.ca
South Dakota	Contractor	DOT	DOT	John Forman, 605-773-5155, john.forman@state.sd.us
Texas	Contractor primarily	DOT and contractor	DOT and contractor	Brian Stanford, Engineer of Field Coordination- Traffic Operations Division/Traffic Engineering Section, 512-416-3122, bstanfo@dot.state.tx.us
Vermont	Contractor	DOT	DOT and contractor	William Ahearn, Materials and Research Engineer, 802-828-2561, Bill.Ahearn@state.vt.us
Washington	Contractor	DOT primarily, contractor for large overhead signs and some smaller	DOT	Dave Bierschbach, Acting State Maintenance Engineer, 360-705-7801, bierscd@wsdot.wa.gov
Wisconsin	Contractor primarily	County	County for plywood and sheet aluminum signs, contractor for large extruded	Matt Rauch, State Signing Engineer, 608-266-0150, matt.rauch@dotstate.wi.us